

**ABSTRACT**

A novel method for improving the meat quality of an animal is provided. The method comprises feeding the animal a diet supplemented with mixed tocotrienols in an amount effective to improve the meat quality. The mixed tocotrienols may be fed alone or in combination with other antioxidants, such as other plant phenolics, alpha lipoic acid and N-acetylcysteine. The method may be practiced on non-ruminants and ruminants.